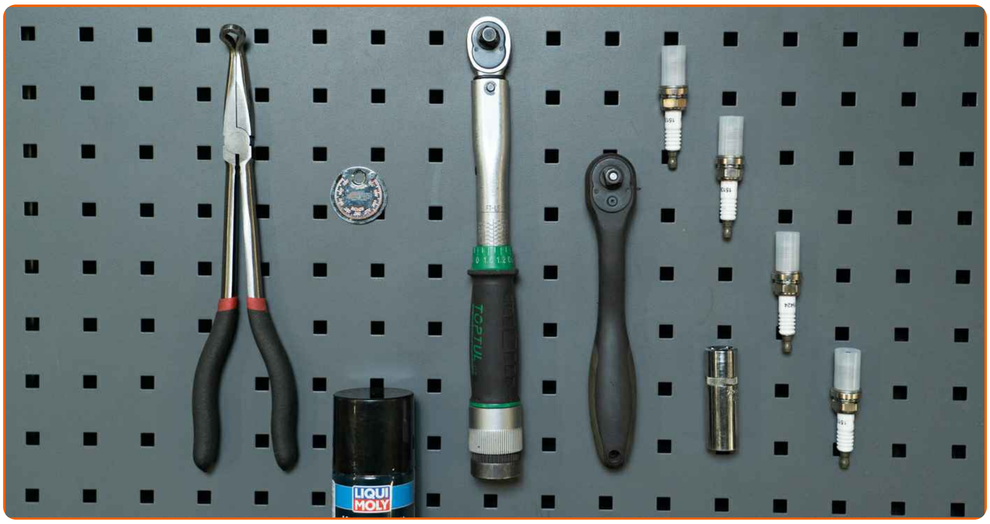
AUTODOC CLUB

How to change spark plugs on a car – replacement tutorial

VIDEO TUTORIAL



WHAT YOU MIGHT NEED:



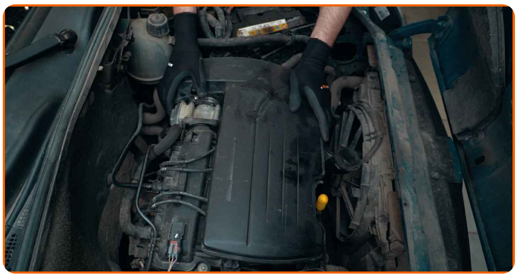
- a set of new spark plugs
- a ratchet wrench or other tool that makes replacement easier
- a spark plug wrench or socket
- a torque wrench
- pliers for removing spark plug caps or ignition coils
- a special tool or feeler gauge set to measure the gaps between the electrodes
- high-temperature and dielectric greases

BUY TOOLS

Please note!

- Nickel, platinum, and iridium plugs are the most common
- The symptoms of bad spark plugs include difficulty starting the engine, engine malfunctioning, and increased fuel consumption
- Typically, nickel versions have a service life of about 30,000 km; iridium ones up to 100,000 km
- All spark plugs must be changed, even if only one has failed
- They have roughly the same lifespan

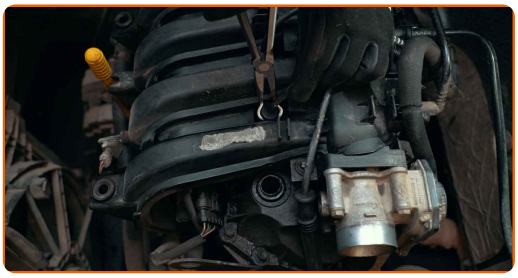
1 To access the spark plugs, it might be necessary to remove some parts under the bonnet



Important!

- The spark plugs are installed in the spark plug wells in the cylinder head
- They can be located either on the side or on top of the cylinder head

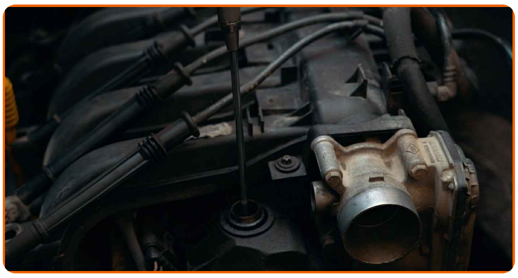
2 Note the order in which the spark plug wires are connected and carefully remove the plug caps



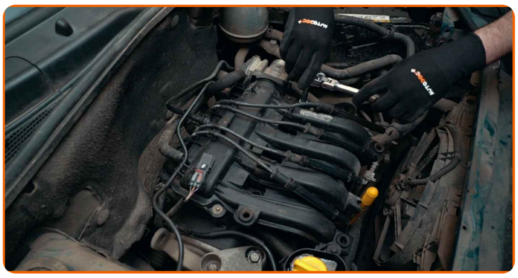
Be careful!

- Do not pull on the wires, as this could damage them
- Usually, spark plug caps snap easily into their mounting seats
- The length of the spark plug caps helps determine how deep the plugs are fitted in the wells

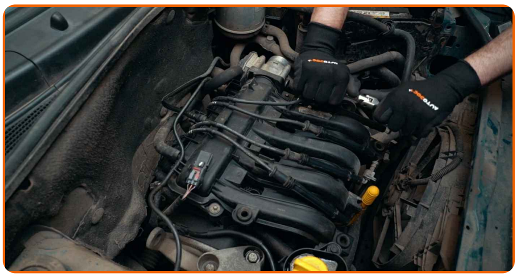
3 To prevent dirt entering the engine, clean the spark plug wells thoroughly before installing the plugs



4 Select a spark plug socket of the required size and lower it into the spark plug well



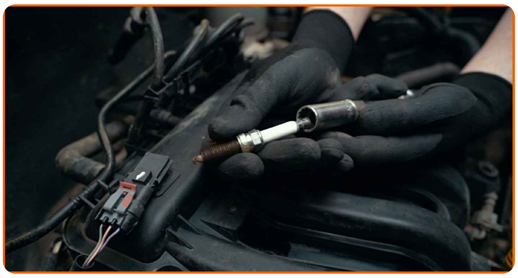
5 Make sure the socket is securely attached to the spark plug and carefully unscrew the component



6 Repeat the same steps with the other spark plugs



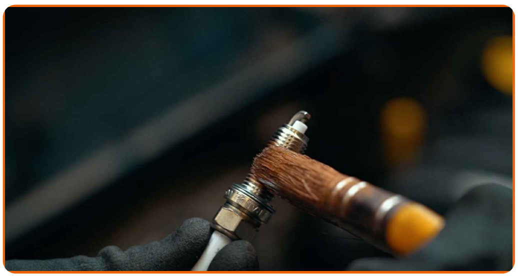
7 Remove the spark plugs from their wells. A special magnetic socket can be used for this



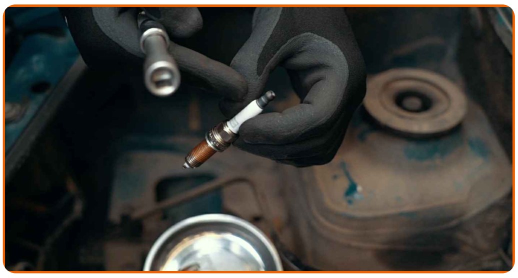
Be careful!

- Do not allow dirt to get in open spark plug wells

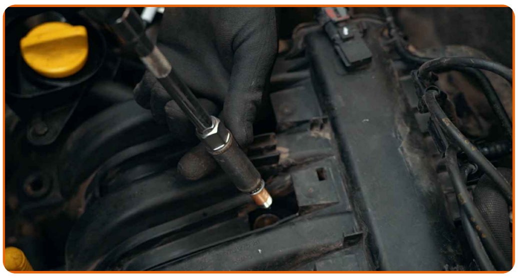
8 Before installing a new spark plug, treat its threaded part with high-temperature grease



9 Apply some dielectric grease to the ceramic insulator



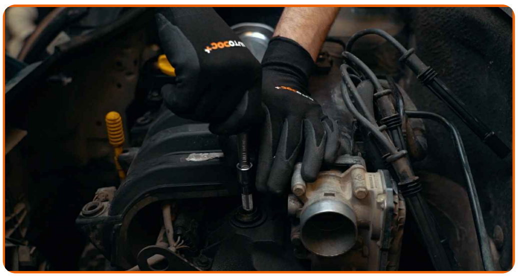
10 Secure the component in the spark plug socket and lower it carefully into the spark plug well



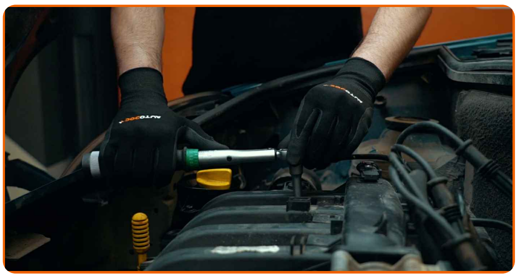
Important!

- Place the plug carefully in the well, as the component may fail if knocked

11 Carefully fit and lightly screw in all the spark plugs

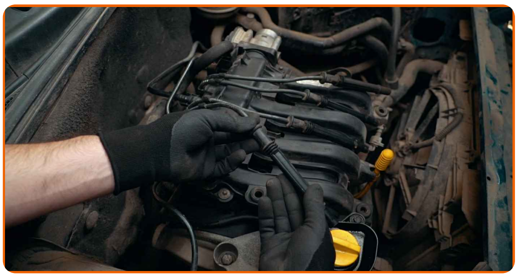


12 Tighten them with a torque wrench to the manufacturer's recommended torque



13

Be sure to inspect the spark plug caps, high-voltage wires, ignition coils, and electric contacts

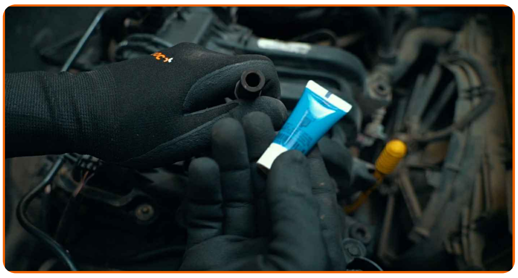


Please note!

- The type of deposit on the spark plug electrodes can help you determine whether the cylinders are working correctly

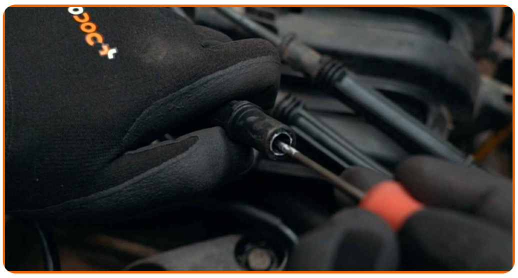
14

Apply a small amount of dielectric grease to the inside walls of the spark plug caps

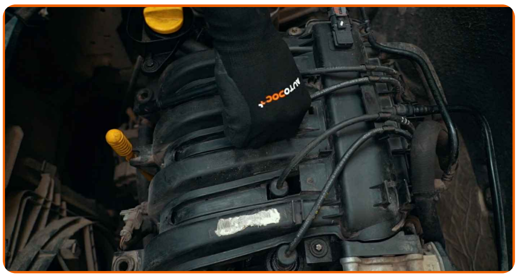


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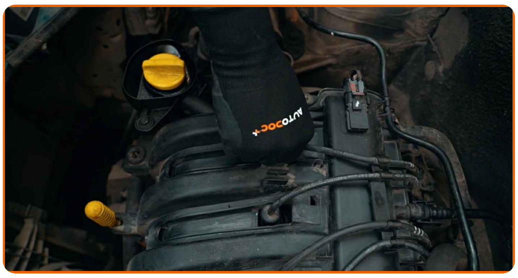
Prevent dielectric grease getting on the electrodes to avoid ignition system malfunctions



16 Install the spark plug caps, making sure they click into place in their mounting seats



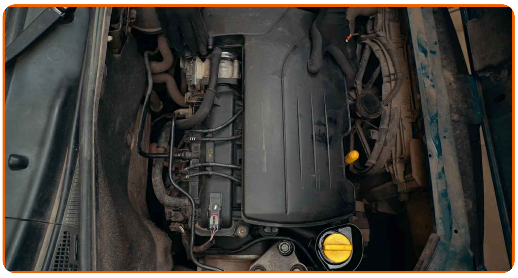
17 When mounting the components, follow the proper connection order



Be careful!

- In case of installation error, the engine will run incorrectly or will not start at all

18 Reinstall all parts that were removed previously and perform a test engine run



19 If the ignition coils are pencil type, the connectors and the coils themselves should be removed to access the spark plugs



Please note!

- In this case, the coils simply snap off, but on some cars they are equipped with additional fasteners
- The number of spark plugs usually corresponds to the number of engine cylinders

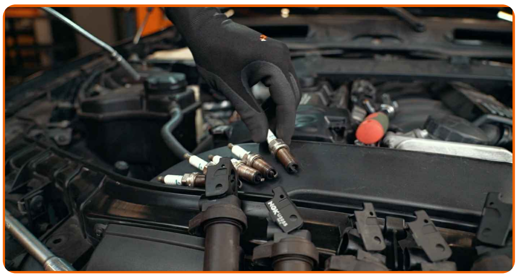
20 Access the spark plug wells, select a suitable spark plug socket and unscrew the plugs



AUTODOC recommends:

- A magnetic spark plug socket can be used to remove the parts from the wells

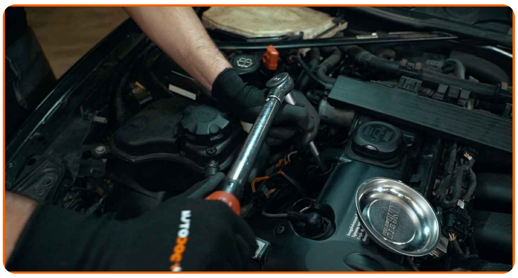
21 Repeat the same steps with the other spark plugs



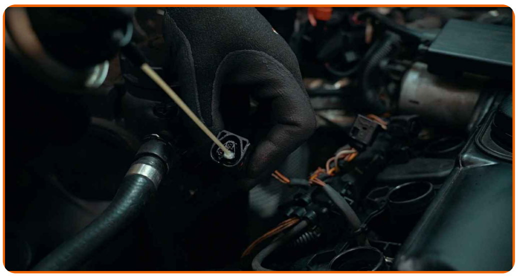
22 Apply high-temperature grease to the thread of new plugs and dielectric grease to the insulator



23 Tighten the components to the manufacturer's recommended torque



24 Inspect the ignition coil connectors and treat them with electrical contact cleaner



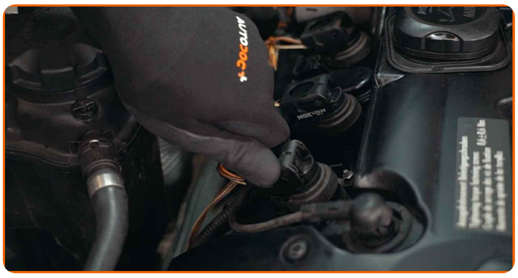
25 Fit the ignition coils in their mounting seats, following the installation order



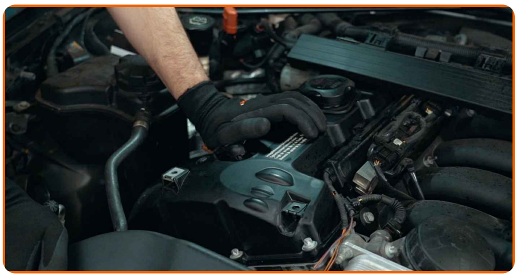
Be careful!

- On some vehicles, each coil must be mounted to a certain cylinder
- If the components are installed incorrectly, the engine cannot be started

26 Attach the connectors and secure the ignition coils



27 Make sure that all components are mounted correctly and then do a test engine run



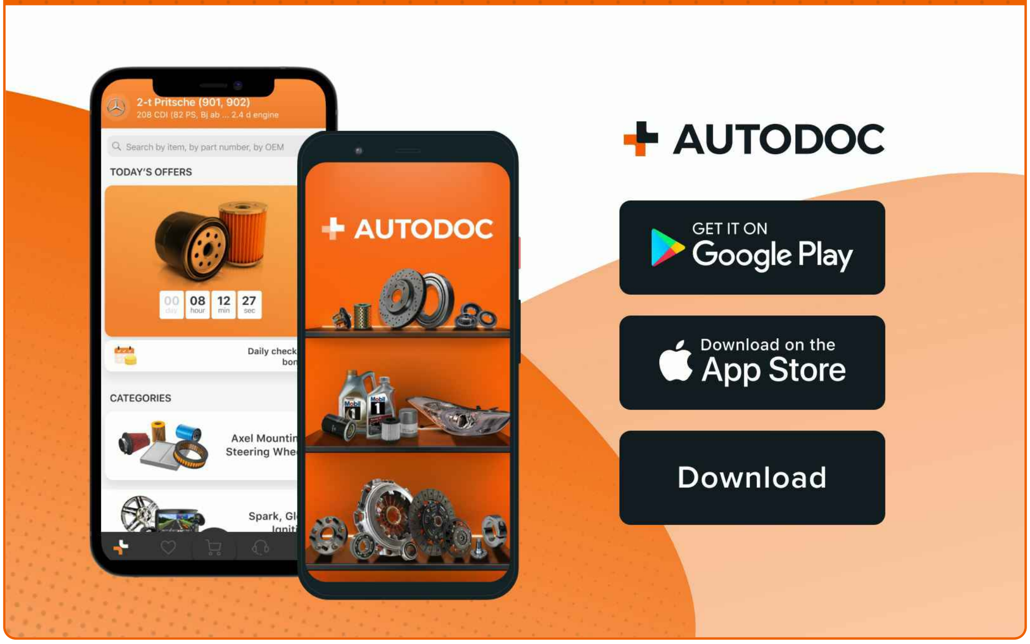
28

Reinstall all the parts that were removed



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SPARK PLUGS: A WIDE SELECTION

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